

## **REMARKS/ARGUMENTS**

Claims 1-3, 7-14, 17-21, 23, 29-30, 32-41, 44-45, 51-53, 56, and 132-138 remain in this application. Claims 1-3, 7, 9-10, 14, 17-18, 23, 29-30, 32-36, 38-39, 41, 44-45, 51, 53, 56, 132, and 135-138 have been amended. Claims 4-6, 15-16, 22, 24-28, 31, 42-43, 46-50, 54-55, and 57-131 have been canceled. Claims 57-131 have been withdrawn. New claims 139-140 have been added.

### **1. Double Patenting**

Claim 5 has been objected to under 37 CFR 1.75(c) because claim 5 is dependent from claim 4. Applicants submit that claim 5 has now been canceled and the objection is obviated, and therefore Applicants request removal of the objection.

The Examiner has advised applicants that should claim 1 be found allowable, claim 31 will be objected to 37 CFR 1.75 as being a duplicate of claim 1. Applicants traverse the potential objection. Claim 30, from which claim 31 depended, recited “a reacting time of between about 1 and 60 minutes to at least partially dope the soot perform”, and therefore, claims 1 and 31 are not substantial duplicates of each other. Applicants note that claims 1 and 30 have been further amended above and claim 31 has been substantially incorporated into claim 30 and is now deleted. Accordingly, Applicants submit that such objection should not be applied to the pending claims.

### **2. Claim Rejections under 35 U.S.C. §112**

Claims 1-3, 7-14, 17-29, 23, 29-41, 44-45, 51-53, 56 and 132-138 have been rejected under 35 U.S.C. 112, second paragraph as being indefinite with regard to the terms “holding” or “pulse” or “hold” or “held” or “pulsing” or “chamber”.

Applicants submit that none of the pending claims now contain any of these terms, and therefore the rejection based on these grounds has been obviated, even though Applicants submit that these terms are not unclear or indefinite; for example, as

discussed on page 22 of the 26 December 2006 response, the Specification on page 6 lines 24-26 states: "The vessel 112 defines a chamber 114 that has an inlet 120 and an outlet 122 each include communication with the chamber 114." It is not clear to Applicants why the Examiner would state that one might conclude that applicant intended that the "chamber 114" constitutes the vessel. Applicants submit that the drawings clearly show vessels with chambers, and that one skilled in the art would know what is meant by a chamber. Applicants therefore submit that one of ordinary skill is reasonably apprised as to what Applicants mean by "chamber 114". On page 22 of the 26 December 2006 response, Applicants asserted that Applicants' definitions are not limited to chamber 114. Indeed Applicants point out that all the pending claims are directed to method embodiments which could be carried out on an apparatus as shown in Fig. 2 or on other apparatuses, such as those shown in other figures in the Application. As mentioned in the 26 December 2006 response, the Specification on page 6 lines 14-21 clearly states that the methods of the present invention may be executed using the apparatus shown in Fig. 2 or other apparatuses including apparatus 200 or 300. As stated in the 26 December 2006 response, Applicants pointed out that with regard to Fig. 4, the Specification on page 23 lines 1-7 clearly states that the apparatus 200 may be used in place of the apparatus 100 to conduct any of the methods described in the application, and on page 21 lines 29-31 the Specification states that the methods of Fig. 3 may be conducted using the apparatus of Fig. 2 or using any other suitable apparatus such as the apparatus 200 and 300. Thus, Applicants submit that one skilled in the art would readily understand that chambers other than chamber 114 could be used in the claimed methods as understood from a plain reading of the Application. Applicants strongly disagree with the assertion of the Examiner that it is Applicants' position that the definitions in the Specification are incorrect. Clearly, it is, and was, Applicants' position that the definitions in the Specification are correct. Applicants further strongly disagree with the assertion of the Examiner that one would be at a complete loss as to what the terms actually mean. Applicants submit that the terms can be readily understood from the Application. Nowhere in any response have Applicants taken the position that the definitions in the Specification are incorrect.

Regarding claim 132 and "the other independent claims", the Examiner asserts that these claims refer to at least one other term defined in the present Application such as in the Specification, page 5, lines 26-30. The Examiner asserts that Applicant is

arguing that the definition for “hold” in the Specification is not appropriate, and it is deemed [by the Examiner] that this calls into question whether the other definitions in the Specification are to be given any weight. The Examiner concludes that it is deemed that one would not be able to determine what the metes and bounds of the terms are. In view of the amendments to the claims, Applicants traverse this rejection of claim 132 and “the other independent claims”.

First, Applicants do not understand whether “the other independent claims” as recited in the rejection by the Examiner refers to all of the pending independent claims, or whether “the other independent claims” refers to a subset of all of the independent claims. Applicants strongly disagree that “applicant is arguing that the definition for “hold” in the Specification is not appropriate”. Applicants did not make such argument. The Examiner appears to be questioning the meaning of other terms in the Specification “or all terms in the Specification” based upon questions particular to the meaning of the terms “holding” or “pulse” or “hold” or “held” or “pulsing” or “chamber”. Applicants submit that one skilled in the art would be able to determine the meaning of the claim terms. Applicants note that claim 132 and claims 1, 30, 51, and their various dependent claims, as appropriate, have been amended to clarify that the gaseous atmosphere surrounding the soot perform may contain compounds as well as other gases, such as F<sub>2</sub>.

The Examiner further states that the dependent claims which refer to steps of pressurizing and the like are indefinite as to whether they require further pressurizing or if they merely limit previously mentioned pressurization, and that there is confusing antecedent basis for “pressurization” in claim 39. Applicants traverse the rejection. Applicants submit that it is not clear which claims the Examiner is objecting to (other than claim 39) in this regard. Both claims 11 and 39 recite pressurizing an outer surface of the vessel to offset pressurization within the vessel Claim 1 (from which claim 11 depends) and claim 30 (from which claim 30 depends), each refer to pressurized gas within a vessel, and therefore Applicants submit that there is nothing confusing about “pressurization” in claim 39. Claim 17 has been amended to refer to the pressures of the first and second gaseous atmospheres, respectively, and Applicants submit that questions about “pressurized” have been obviated. Claims 34, 35, 36, and 38 refer to the pressurization of the second gaseous atmosphere.

In view of the above and the foregoing, Applicants request reconsideration and withdrawal of the rejections under 35 U.S.C. § 112, and allowance of the claims.

### **3. Claim rejections under 35 U.S.C. § 102**

Claims 1-3, 7-14, 17-21, 23, 29-41, 44-45, 51-53, 56 and 132-138 have been rejected under 35 U.S.C. 102(b) or 35 U.S.C. 103(a) as being anticipated by Ishiguro, Yokoyama, Schneider, Hicks or Ishikawa.

In view of the claims as amended, the rejections are traversed.

Applicants note that the Examiner refers to a prior office action of 2 June 2004 for the manner in which the art is applied to the claims, although the claims have been amended since that time, and therefore it is not clear to Applicants how the art is applied to the current set of claims. However, Applicants wish to make a bona fide attempt to respond to the rejections.

With regard to the term “hold” – which term no longer appears in any of the claims – the Examiner appears to be pointing to Applicants’ statement that the Specification indicates that the methods may be executed using other apparatuses described in the application and then incorrectly concluding that Applicants’ statement means that the claimed methods can be executed using other methods described in the Specification. This argument of the reasoning of the Examiner is not clear to Applicants, and Applicants disagree with the conclusion of the Examiner, but this argument is now moot in view of the fact that the term “hold” no longer appears in the claims.

The Examiner has asserted that the applicant made no assertion in the previous response in accordance with 37 CFR 1.111 that there is any patentable novelty or what such novelty is. Applicant submits that 37 CFR 1.111 states that a reply must present arguments pointing out the specific distinctions believed to render the claims, including any newly presented claims, patentable *over any applied references*. As the previous Office Action contained only rejections under 35 USC § 112, there were no applied references in that Office Action, and Applicants submit that assertions regarding novelty were not required.

None of the references applied by the Examiner in the current Office Action teach or suggest the presently claimed methods. For example: Ishiguro does not teach or suggest that the partial pressure of its F-compound gas decreases during the doping, i.e. as seen in Figs. 4A, 4B, and 4C of Ishiguro, the partial pressure is either constant or increases; Yokoyama does not teach or suggest retaining a soot preform in order to undergo contact with a plurality of doping atmospheres, that is, the intervening clad layer formation taught by Yokoyama requires that the soot preform be consolidated and then additional soot applied via OVD or VAD processes, and Yokoyama does not teach or suggest doping a soot preform, consolidating the preform, adding additional layer of soot, and doping the additional layer, all in the same vessel; neither Schneider, nor Hicks, nor Yokoyama, nor Ishikawa teach or suggest pressurizing the gaseous atmosphere (such as to a gage pressure of at least 0.1 atm gage) during doping; none of the cited references teaches or suggests sealing a vessel gas-tight and maintaining the soot preform in contact with a gaseous atmosphere within the vessel.

In view of the above and foregoing, Applicants request reconsideration and withdrawal of the rejections under 35 U.S.C. § 102 and 103, and allowance of the claims.

#### **4. Conclusion**

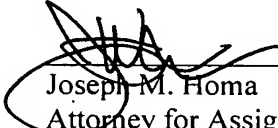
Based upon the above amendments, remarks, and papers of records, applicant believes the pending claims of the above-captioned application are in allowable form and patentable over the prior art of record. Applicants respectfully request reconsideration and further examination and Applicants request that a timely Notice of Allowance be issued in this case.

Applicants believe that no extension of time is necessary to make this Reply timely. Should Applicants be in error, Applicants respectfully request that the Office grant such time extension pursuant to 37 C.F.R. § 1.136(a) as necessary to make this Reply timely, and hereby authorize the Office to charge any necessary fee or surcharge with respect to said time extension to the deposit account of the undersigned firm of attorneys, Deposit Account 03-3325.

Please direct any questions or comments to Joseph M. Homa at 607-974-9061.

Respectfully submitted,

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